

WE CLAIM

1. In a CDMA network, a method for controlling a pilot power of a
 5 cell, said method comprising:
 determining a transcoder loss per frame within the cell; and
 computing a cell performance matrix of the cell when the
 transcoder loss per frame is equal to or greater than a threshold value.

10 2. The method of claim 1, wherein the cell performance matrix is
 computed according to:

$$CellPerformanceMetric = \left(\frac{CP}{T} \right) \times \left(\frac{FE}{F} \right) \times \left(\frac{TLU}{TLD} \right) \times \left(\frac{Ec}{Io} Average \right)$$

15 3. The method of claim 1, further comprising:
 computing a cluster performance matrix of a cell cluster
 associated with the cell when the transcoder loss per frame is equal to or
 greater than a threshold value, the cell cluster.

20 4. The method of claim 3, wherein the cluster performance matrix
 is an average of each cell performance matrix for each cell within the cell
 cluster, and each cell performance matrix is computed according to:

$$CellPerformanceMetric = \left(\frac{CP}{T} \right) \times \left(\frac{FE}{F} \right) \times \left(\frac{TLU}{TLD} \right) \times \left(\frac{Ec}{Io} Average \right)$$

25 5. The method of claim 3, further comprising:
 conditionally decreasing the pilot power of the cell when the cell
 performance matrix is less than the cluster performance matrix.

30 6. The method of claim 3, further comprising:
 conditionally increasing the pilot power of the cell when the cell
 performance matrix is equal to or greater than the cluster performance matrix.

7. A CDMA network, said comprising:
 a cell having a pilot power; and
 a base station operable to determine a transcoder loss per
 frame within said cell, and to compute a cell performance matrix of said cell
 5 when the transcoder loss per frame is equal to or greater than a threshold
 value.

8. The CDMA network of claim 7, wherein said base station
 computes the cell performance matrix according to:

$$10 \quad \text{CellPerformanceMetric} = \left(\frac{CP}{T} \right) \times \left(\frac{FE}{F} \right) \times \left(\frac{TLU}{TLD} \right) \times \left(\frac{Ec}{Io} \text{Average} \right)$$

9. The CDMA network of claim 7, further comprising:
 a cell cluster associated with said cell,
 wherein said base station is further operable to compute a
 15 cluster performance matrix of said cell cluster when the transcoder loss per
 frame is equal to or greater than a threshold value.

10. The CDMA network of claim 9, wherein said base station
 computes the cluster performance matrix as an average of each cell
 20 performance matrix for each cell within the cell cluster, and computes each
 cell performance matrix according to:

$$\text{CellPerformanceMetric} = \left(\frac{CP}{T} \right) \times \left(\frac{FE}{F} \right) \times \left(\frac{TLU}{TLD} \right) \times \left(\frac{Ec}{Io} \text{Average} \right)$$

11. The CDMA network of claim 9, wherein said base station is
 25 further operable to conditionally decrease the pilot power of said cell when the
 cell performance matrix is less than the cluster performance matrix.

12. The CDMA network of claim 9, wherein said base station is
 further operable to conditionally increase the pilot power of said cell of the cell
 30 when the cell performance matrix is equal to or greater than the cluster
 performance matrix.

13. A CDMA network, comprising:
a cell having a pilot power;
means for determining a transcoder loss per frame within a cell;
5 and
means for computing a cell performance matrix of the cell when
the transcoder loss per frame is equal to or greater than a threshold value.

14. The CDMA network of claim 13, further comprising:
10 a cell cluster associated with said cell; and
means for computing a cluster performance matrix of said cell
cluster when the transcoder loss per frame is equal to or greater than a
threshold value.

15. The CDMA network of claim 14, further comprising:
means for conditionally decreasing the pilot power of the cell by
a fixed increment when the cell performance matrix is less than the cluster
performance matrix.

20 16. The CDMA network of claim 14, further comprising:
means for conditionally increasing the pilot power of the cell by a
fixed increment when the cell performance matrix is equal to or greater than
the cluster performance matrix.

17. A computer readable medium storing a computer program for controlling a pilot power of a cell within a CDMA network, said computer readable medium comprising:

5 computer readable code for determining a transcoder loss per frame within the cell; and

computer readable code for computing a cell performance matrix of the cell when the transcoder loss per frame is equal to or greater than a threshold value.

10

18. The computer readable medium of claim 17, wherein the cell performance matrix is computed according to:

$$CellPerformanceMetric = \left(\frac{CP}{T} \right) \times \left(\frac{FE}{F} \right) \times \left(\frac{TLU}{TLD} \right) \times \left(\frac{Ec}{Io} Average \right)$$

15

19. The computer readable medium of claim 17, further comprising:
computer readable code for computing a cluster performance matrix of a cell cluster of the CDMA network that is associated with the cell when the transcoder loss per frame is equal to or greater than a threshold value.

20

20. The computer readable medium of claim 19, wherein the cluster performance matrix is an average of each cell performance matrix for each cell within the cell cluster, and each cell performance matrix is computed according to:

25

$$CellPerformanceMetric = \left(\frac{CP}{T} \right) \times \left(\frac{FE}{F} \right) \times \left(\frac{TLU}{TLD} \right) \times \left(\frac{Ec}{Io} Average \right)$$

21. The computer readable medium of claim 19, further comprising:
computer readable code for conditionally decreasing the pilot power of the cell when the cell performance matrix is less than the cluster performance matrix.

30

22. The computer readable medium of claim 19, further comprising:
computer readable code for conditionally increasing the pilot
power of the cell when the cell performance matrix is equal to or greater than
5 the cluster performance matrix.

23. A method for controlling a pilot power of a cell within a CDMA network, said method comprising:

- 5 computing a cell performance matrix of the cell;
- computing a cluster performance matrix of a cell cluster associated with the cell;
- controlling the pilot power based upon a computation of the cell performance matrix and a computation of the cluster performance matrix.

24. A CDMA network, said method comprising:
- a cell having a pilot power;
 - a cell cluster associated with said cell; and
 - a base station,
- 5 wherein said base station is operable to compute a cell performance matrix of said cell,
- wherein said base station is further operable to compute a cluster performance matrix of said cell cluster, and
- 10 wherein said base station is further operable to control the pilot power based upon a computation of the cell performance matrix and a computation of the cluster performance matrix.

DRAFT 4/23/00

25. A CDMA network, said method comprising:
- 5 a cell having a pilot power;
means for computing cell performance matrix of said cell,
a cell cluster associated with said cell;
means for computing a cluster performance matrix of said cell
cluster; and
means for controlling the pilot power based upon a computation
of the cell performance matrix and a computation of the cluster performance
10 matrix.

